REMARKS

In the Office Action mailed March 21, 2007 the Examiner noted that claims 1-18 were pending and rejected claims 1-18. No claims have been amended, no claims have been canceled, no new claims have been added and, thus, in view of the forgoing claims 1-18 remain pending for reconsideration which is requested. No new matter has been added. The Examiner's rejections are traversed below.

REJECTIONS under 35 U.S.C. § 102

Claims 1-4, 6, 8-12, 14 and 16-18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kikuchi, U.S. Patent No. 6,385,758. Kikuchi discusses the compaction of components on a printed circuit board. The present claims are to a design apparatus that performs the design by calculating the contour of a component region on a printed circuit board.

In the *Response to Arguments* at page 8, items 17 and 18, the Examiner states:

> Applicant asserts that Kikuchi fails to teach or suggest: the calculation of a contour of a component region. Examiner disagrees with this assertion.
>
> Examiner points out that Kikuchi teaches: the calculation of a contour of a component region (decomposition [i.e. processing calculating] of component contours and substrate contour lines, see Col 7, lines 55-65.
>
> Kikuchi col. 7 lines 55-65 states:
>
> Referring to FIG. 4, the layout data converter 111 is supplied with the layout data illustrated in FIG. 9 and prepares the segment data. Specifically, various graphic elements in a layout pattern, such as the component terminals, the via holes, the wires, polygonal conductor configurations, component contours, substrate contour lines, and marking patterns and characters are decomposed per each layer plane into the segments each of which is approximated to an octagonal configuration.

Thus, Kikuchi merely discusses that the layout data converter is supplied with layout data of a number of components including “component contours” and “substrate contour lines.” Not the calculation of a contour of a component region. In the Office Action page 3, the Examiner further asserts that “and to calculate a contour (processing and decomposing component contours and substrate contour lines, Col 7, lines 55-65) of a component region for collectively arranging the plurality of components (i.e. component contours are arranged, Col 8, lines 4-6)” Kikuchi, Col 8 lines 1-16 states:

> More specifically, the layout data converter 111 arranges the **component**

> **terminals and the wires on a signal layer plane and a power supply and ground layer plane while the component contours are arranged on a component contour layer plane** The layout data converter 111 arranges on a marking layer plane the marking patterns and characters together with a marking inhibiting region such as working hole positions interfering the marking patterns and characters. In addition, the layout data converter 111 decomposes the routes for each of the signal layer plane and the power supply and ground layer plane into route segments divided at bending points, branching points, and intersecting points with the component terminals. The polygonal conductor configurations are decomposed into a plurality of sides. Thus, the segment data are prepared for the routes and the polygonal conductor configurations. [Emphasis added]

Thus, Kikuchi discusses that component contours are arranged on a component contour layer and that other components are arranged on their respective layers. But, Kikuchi does not disclose how the components are arranged. For instance, Kikuchi does not teach or suggest that the components are arranged based on the contour information of the plurality of components. Therefore, Kikuchi does not teach or suggest "a calculation device to obtain contour information about the plurality of components from the storage device and to calculate a contour of a component region for collectively arranging the plurality of components using the obtained contour information and the indicated layout distance," as in claim 1.

Claims 9 and 17 emphasize similar features. Therefore, claims 1, 9 and 17 and the claims dependent therefrom are patentably distinguishable from Kikuchi.

As regards dependent claims 8 and 16, Kikuchi Col. 4 lines 50-55 discusses compacting based on a relationship between components, but it does not disclose a indicated reference component. Therefore, Kikuchi does not teach or suggest "the calculation device calculates a contour of the component region in consideration of a relative position relation between the indicated reference component and the plurality of components."

Withdrawal of the rejections is respectfully requested.

REJECTIONS under 35 U.S.C. § 103

Claims 5, 7, 13 and 15 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kikuchi in view of Aubel, U.S. Patent No. 6,910,200. Claims 5, 7, 13, and 15 are dependent claims of independent claims 1 and 11. As argued in the traversal of the 35 U.S.C. § 102(b) rejections, claims 1 and 11 patentably distinguishable as Kikuchi does not teach or suggest the calculation of a contour of a component region. Aubel further does don't teach or suggest the calculation of a contour of a component region and therefore the combination of Kikuchi and Aubel fails to teach or suggest ever element of the rejected claims.

Withdrawal of the rejections is respectfully requested.

SUMMARY

It is submitted that the claims satisfy the requirements of 35 U.S.C. §§ 102 and 103. It is also submitted that claims 1-18 continue to be allowable. It is further submitted that the claims are not taught, disclosed or suggested by the prior art. The claims are therefore in a condition suitable for allowance. An early Notice of Allowance is requested.

If any further fees, other than and except for the issue fee, are necessary with respect to this paper, the U.S.P.T.O. is requested to obtain the same from deposit account number 19-3935.

Respectfully submitted,

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